

No. 775,691. PATENTED NOV. 22, 1904.
 JOSÉ NICOLAS MARTINEZ DE VALDIVIELSO Y MARTINEZ DE VALDIVIELSO.
 APPARATUS FOR REMOVING THE HONEY OR SECTION BOXES
 FROM HIVE SECTION CASES OR SUPERS.

APPLICATION FILED APR. 29, 1903.

NO MODEL.

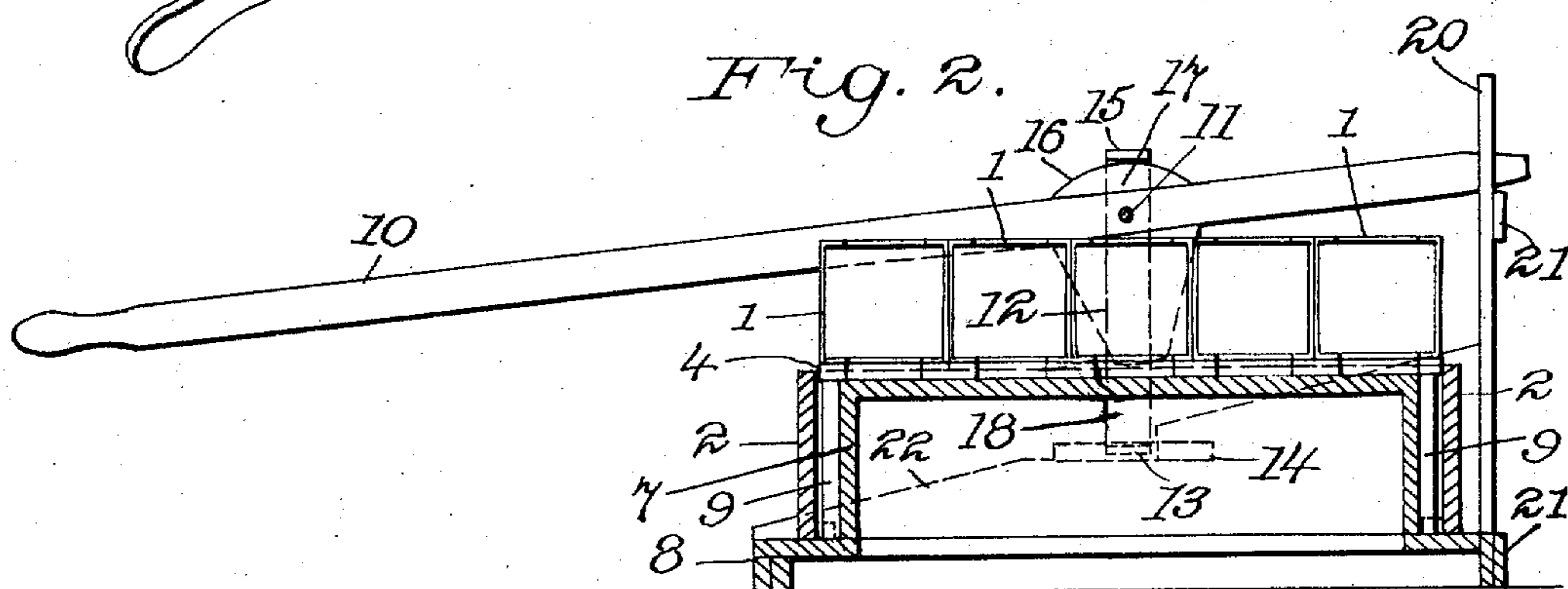
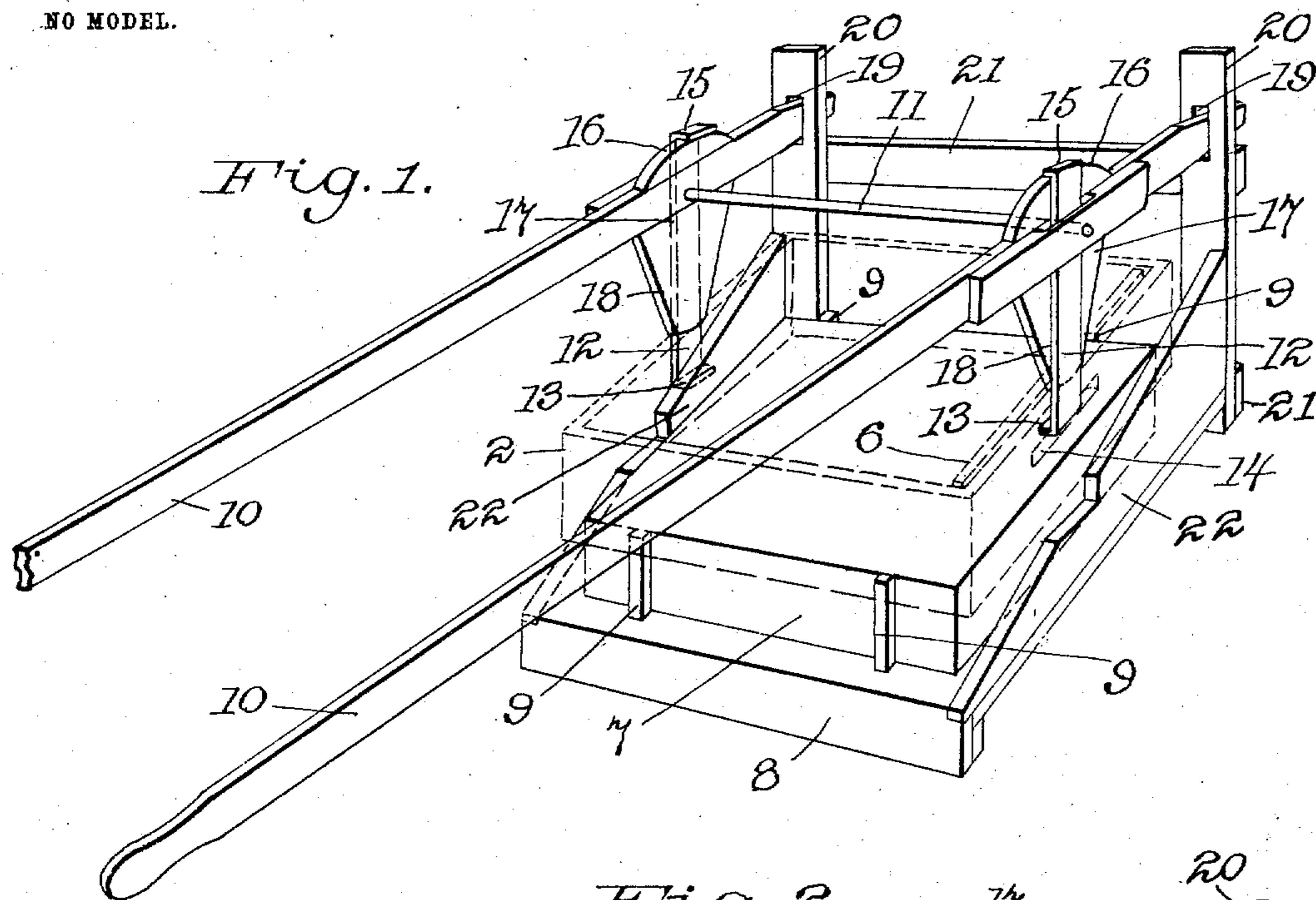
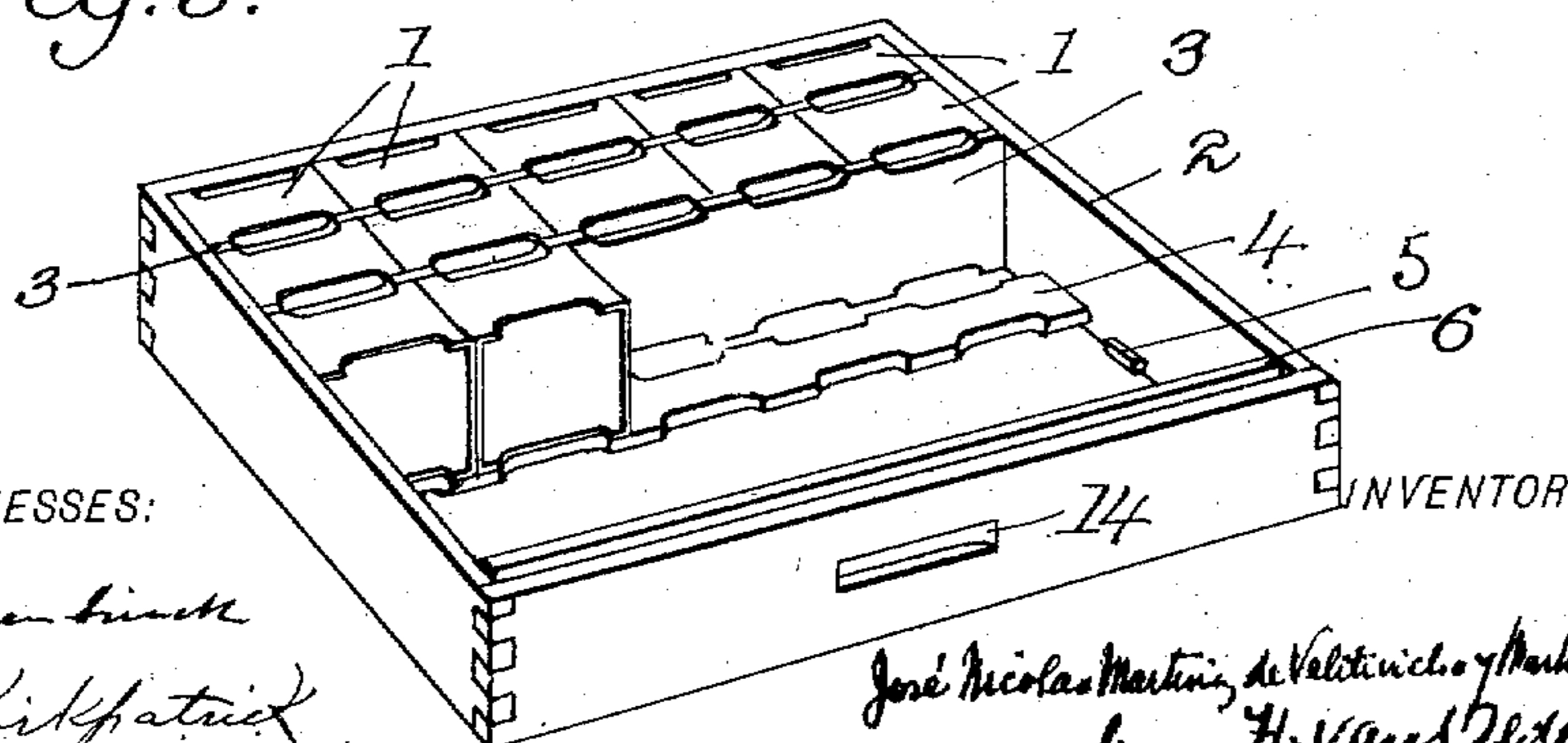


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSÉ NICOLAS MARTINEZ DE VALDIVIELSO Y MARTINEZ DE VALDIVIELSO,
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APPARATUS FOR REMOVING THE HONEY OR SECTION BOXES FROM HIVE SECTION-CASES OR SUPERS.

SPECIFICATION forming part of Letters Patent No. 775,691, dated November 22, 1904.

Application filed April 29, 1903. Serial No. 154,757. (No model.)

To all whom it may concern:

Be it known that I, JOSÉ NICOLAS MARTINEZ DE VALDIVIELSO Y MARTINEZ DE VALDIVIELSO, a citizen of the Republic of Cuba, residing at Matanzas, Province of Matanzas, Cuba, have invented a new and useful Improvement in Apparatus for Removing the Honey or Section Boxes from Hive Section-Cases or Supers; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to apparatus for removing the honey or section boxes from hive section-cases or supers, the object being to simultaneously remove the boxes *en masse* from a case in a ready and convenient manner without crushing or otherwise injuring either the boxes or the contained honey.

In the accompanying drawings I have shown apparatus such as may be employed for carrying my invention into effect; but it will be understood that I do not wish to limit myself to the construction shown, as other forms of apparatus may be used and substantially the same result obtained.

In the drawings, Figure 1 is a view in perspective of a preferred form of apparatus embodying my invention, a section-case or super being indicated by dotted lines in the position it occupies before the honey-boxes are removed. Fig. 2 is a central vertical sectional view showing the boxes removed from the section-case; and Fig. 3 is a view in perspective of a section-case, partly filled with boxes.

As shown, the honey or section boxes 1 are ordinarily assembled side by side in rows in the section-case or super 2, with separators 3 interposed between the rows. Each row of boxes is supported on a removable bottom bar 4, the ends of which rest on fixed cleats, brackets, or the like 5, projecting from opposite inner side walls of the case, and the whole is frictionally held therein by springs, clamps, or wedges arranged between the side of the case and an inner bar 6, extending parallel with the separators. Thus arranged the boxes &c. when clean and free may be lifted out of the case, or if gummed over and adhesively bound together they may be forced

upward by applying pressure from below, it being impossible in removing them to force them downward, as they are positively held on fixed supports—*i. e.*, the cleats or brackets above referred to. The various parts are made separable to facilitate their removal and are assembled in close relation to prevent the deposit or entrance of wax, honey, &c., in the joints. In practice, however, it is found that notwithstanding these precautions the boxes, &c., become overspread with this adhesive mixture, which binds them so firmly in the section-case as to render their removal by hand extremely difficult and in many instances impossible without cracking or breaking a number of the boxes and destroying more or less honeycomb in the operation.

The apparatus thus far described forms no part of my invention, the same being the well-known form of hive section-case, &c., now in general use in apiaries and such as may be purchased in open market.

The present invention consists, essentially, in means for emptying a section-case and at the same time protecting the boxes and honey from injury.

In the practical application of my invention I preferably support the boxes and apply pressure to the section-case to force the same downward and leave the contents free and clear thereof on the support. Substantially the same result might obviously be obtained by reversing the operation—that is to say, supporting the case and applying pressure to the bottom bars to force the same together with the boxes supported thereon upward clear of the case. As shown, such a support may be in the form of a platform 7, mounted on a table 8, the relative proportions of the platform and section-case being such that they will telescope one within the other. Spacing-bars 9 are secured on opposite ends of the platform to provide clearance as the case is forced over the same for the cleats or bottom bar-supports on the inner walls thereof. If now, as will be seen from the foregoing, a section-case from which the boxes are to be removed is placed upon the platform and pressure applied to the case, forcing it downward

upon the table, the entire contents will be removed therefrom by being supported upon the platform and there will be no tendency to crush or break the boxes or the contained honeycomb.

For convenience in handling the section-cases and in order that pressure may be applied equally upon opposite sides thereof in the removal of the boxes I employ twin levers 10 and suitable means in connection therewith for clamping a section-case in position between the same. As shown in Fig. 1, the levers are connected by a cross rod or shaft 11, on which are mounted clamp-bars 12, there being one of such bars for each lever. The ends of the bars are bent over at right angles in opposite directions, the lower bent-up ends 13 thereof being designed to take under or engage handles, cleats, or notches 14 of the section-case, while the upper or opposite ends 15 ride on the faces of the segments 16 of cams 17, formed in part with the levers. The lower segments 18 of these cams cooperate with the upper edge of the section-case, and when therefore the levers are raised the resulting rotation of the cams will clamp the section-case between the lower ends of the bars and the lower cam-segments. The levers are operatively connected with the table by having their ends tapered to enter slots or openings 19, formed in uprights 20, rising from the rear end of the table, such uprights being supported by braces 21 22. The braces 22 extend parallel and adjacent to the sides of the platform and serve also to guide the section-case when being forced downward over the platform.

As the operation will now be generally understood, I will describe the same briefly. Assuming the apparatus to be in the position shown in Fig. 1, the section-case from which the boxes are to be removed is placed upon the platform, as indicated, and with the lower bent-up ends of the clamp-bars engaging the notches in the side walls of the case the free ends of the levers are elevated to rotate the cams and clamp the case in the manner described. If now pressure is applied to the long ends of the levers, the section-case will be forced down over the platform, as shown in Fig. 2, leaving the boxes, bottom bars, and separators intact thereon. After the boxes, &c., have been removed from the platform the section-case may be elevated by raising the free ends of the levers and after releasing the clamps set aside and another placed in position and the operation as above described repeated.

Some of the main advantages of my invention are as follows: The section-cases may be emptied expeditiously and economically with

out danger of destroying either the apparatus or the honeycomb. The power required for operating the apparatus may be reduced as desired by lengthening the levers or substituting compound levers or an equivalent device, so that a boy or girl may operate the same with little effort. The apparatus is extremely simple in construction and effective in operation and may be readily produced at a comparatively low cost of manufacture. Being free of complicated or delicate parts it may be built strong and durable either in wood or metal, the former being preferred owing to its lightness and the saving in cost.

It will be understood that I do not wish to limit myself to the exact construction and arrangement shown and described, as various changes may be made without departing from the spirit and scope of my invention. For example, other clamping means might be employed and the levers pivotally mounted on the table. Means might be employed for applying pressure at more than two points on the section-case; but all such modifications I consider obvious and immaterial variations of form and not of substance and still within the meaning of the present invention.

Having therefore described my invention, I claim—

1. An apparatus for removing the section-boxes from a hive section-case comprising in its construction, a support for the boxes, means for applying requisite pressure at suitable points on the case to force it downward over the support and clear of the boxes, and mechanism cooperating to clamp the case to the pressure-applying means.

2. An apparatus for removing the section-boxes from a hive section-case comprising in its construction a support common to the several boxes and adapted to telescope into the case, levers mounted to exert pressure upon the case, and clamping devices for removably securing the case to the levers.

3. An apparatus for removing the section-boxes from a hive section-case comprising in its construction a base provided with a raised platform adapted to telescope into the case as a support common to the several boxes, levers mounted in uprights of the base, and clamps carried by the levers for removably securing the case.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSÉ NICOLAS MARTINEZ DE VALDIVIELSO
Y MARTINEZ DE VALDIVIELSO.

Witnesses:

JAMES H. SPRINGER,
S. D. HARRISS.